

Notice of Allowability**Application No.**

10/021,392

Applicant(s)

DEWEY ET AL.

Examiner

Cam Y T. Truong

Art Unit

2169

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/29/2008.
2. ☒ The allowed claim(s) is/are 32,33,35,39 and 47-54.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 1/8/2008, 1/7/2008, 12/21/2007
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date ____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

Cam Y Truong
Primary Examiner
Art Unit: 2169

DETAILED ACTION

1. Applicant has amended claims 1, 35, 39, added claims 47-54 in the amendment 7/29/2008. Claims 32-33, 35, 39, 47-54 are pending in this Office Action.

The filed drawings on 12/12/2001 is accepted.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Rene' A. Pereyra Reg# 45,800 on 12/11/2008.

In the specification:

Please replace page 9, lines 5-24 to page 10, lines 1-11 with the below paragraph.

The computer 110 typically includes a variety of computer-readable media. Computer-readable media can be any available storage media that can be accessed by the computer 110 and includes both volatile and nonvolatile storage media, and removable and non-removable storage media. By way of example, and not limitation, computer-readable media may comprise computer storage medium. Computer storage medium includes both volatile and nonvolatile storage medium, removable and non-

removable storage medium implemented in any method or technology for storage of information such as computer-readable instructions, data structures, program modules or other data. Computer storage medium includes, but is not limited to, RAM, ROM, EEPROM, flash memory or other memory, CD-ROM, digital versatile disks (DVD) or other optical disk storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or any other storage medium which can be used to store the desired information and which can be accessed by the computer 110.

Communication media typically embodies computer-readable instructions, data structures, program modules or other data in a modulated data signal such as a carrier wave or other transport mechanism and includes any information delivery media. The term modulated data "signal" means a signal that has one or more of its characteristics set or changed in such a manner as to encode information in the signal. By way of example, and not limitation, communication media includes wired media such as a wired network or direct-wired connection, and wireless media such as acoustic, RF, infrared and other wireless media.

In claims:

Please replace claims 32, 35, 39, 47-54 with amended claims 32, 35, 39, 47-54.

32. (Currently Amended) A computer-implemented method, comprising:

receiving a first request to locate information corresponding to prior versions of a file or folder, the file or folder is stored in a computer storage medium;

in response to the first request to locate the information, automatically obtaining a set of a plurality of timestamps, each timestamp of the plurality of timestamps corresponding to each shadow volume of a plurality of shadow volumes that have a prior version of the file or folder maintained therein, wherein said each shadow volume of the plurality of shadow volumes is a different point in time read-only copy of a logical volume at different times, said each shadow volume of the plurality of shadow volumes having a corresponding differential file, wherein the obtaining the set of the plurality of timestamps comprises communicating with at least one remote file server device having at least one shadow volume;

receiving an indication of whether a filtering process for the shadow volumes should be performed;

determining whether the indication indicates that unique file filtering is active;

when the unique file filtering is not active, generating a list from a set of timestamps;

when the unique file filtering is active:

for each timestamp in the set of timestamps, sending a request for file or folder attributes from a corresponding shadow volume by embedding a timestamp as a token in a path such that a distributed file server changes at distributed file system junction points do not affect the timestamp;

generating a list of timestamps based on each response to the request for the file or folder attributes, each entry in list indicative of accessibility of the file or folder associated with said each entry, wherein the request for the file or folder attributes comprises setting a special parsing bit in a header of the request such that the request is flagged and the remote file server device detects the embedded timestamp; and

filtering from the generated list of timestamps an entry of a prior version of the file that is not unique with respect to another prior version of the file already represented in the list of timestamps; and

providing the filtered list of timestamps in response to the first request to locate the information such that the information enables retrieval of a corresponding version of a file or folder in the filtered list of timestamps, and wherein selection of a prior version of a file replaces a most current version of the file.

33. (Currently Amended) The method of claim 32 wherein receiving a request to locate information comprises receiving an application program interface call.

35. (Currently Amended) The method of claim 32, wherein requesting file or folder attributes from a corresponding volume comprises, identifying a shadow volume via its corresponding timestamp in a request.

39. (Currently Amended) The method of claim 32, wherein generating the list of timestamps comprises, determine from response to the request for the file or folder

attributes whether the file or folder exists on a shadow volume identified via a timestamp, and if so, including an entry representing a corresponding timestamp in the list of timestamps.

47. (Currently Amended) A computer storage medium storing instructions that when executed by a computer cause the computer to:

- receive a first request to locate information corresponding to prior versions of a file or folder;

- in response to the first request to locate the information, automatically obtaining a set of a plurality of timestamps, each timestamp of the plurality of timestamps corresponding to each shadow volume of a plurality of shadow volumes that have a prior version of the file or folder maintained therein, wherein said each shadow volume of the plurality of shadow volumes is a different point in time read-only copy of a logical volume at different times, said each shadow volume of the plurality of shadow volumes having a corresponding differential file, wherein the obtaining the set of the plurality of timestamps comprises communicating with at least one remote file server device having at least one shadow volume;

- receive an indication of whether a filtering process for the shadow volumes should be performed;

- determine whether the indication indicates that unique file filtering is active;

- when the unique file filtering is not active, generating a list from a set of timestamps;

when the unique file filtering is active:

for each timestamp in the set of timestamps, sending a request for file or folder attributes from a corresponding shadow volume by embedding a timestamp as a token in a path such that a distributed file server changes at distributed file system junction points do not affect the timestamp;

generate a list of timestamps based on each response to the request for the file or folder attributes, each entry in list indicative of accessibility of the file or folder associated with said each entry, wherein the request for the file or folder attributes comprises setting a special parsing bit in a header of the request such that the request is flagged and the remote file server device detects the embedded timestamp; and

filter from the generated list of timestamps an entry of a prior version of the file that is not unique with respect to another prior version of the file already represented in the list of timestamps; and

provide the filtered list of timestamps in response to the first request to locate the information such that the information enables retrieval of a corresponding version of a file or folder in the filtered list of timestamps, and wherein selection of a prior version of a file replaces a most current version of the file.

48. (Currently Amended) The computer storage medium of claim 47, wherein receive a request to locate information comprises receiving an application program interface call.

49. (Currently Amended) The computer storage medium of claim 47, wherein request file or folder attributes from a corresponding volume comprises, identifying a shadow volume via its corresponding timestamp in a request.

50. (Currently Amended) The computer storage medium of claim 47, wherein generate the list of timestamps comprises, determine from response to the request for the file or folder attributes whether the file or folder exists on a shadow volume identified via a timestamp, and if so, including an entry representing a corresponding timestamp in the list of timestamps.

51. (Currently Amended) A computing device included a processor and a memory, the computing device configured to:

receive a first request to locate information corresponding to prior versions of a file or folder, the file or folder is stored in a computer readable storage medium;

in response to the first request to locate the information, automatically obtaining a set of a plurality of timestamps, each timestamp of the plurality of timestamps corresponding to each shadow volume of a plurality of shadow volumes that have a prior version of the file or folder maintained therein, wherein said each shadow volume

of the plurality of shadow volumes is a different point in time read-only copy of a logical volume at different times, said each shadow volume of the plurality of shadow volumes having a corresponding differential file, wherein the obtaining the set of the plurality of timestamps comprises communicating with at least one remote file server device having at least one shadow volume;

receive an indication of whether a filtering process for the shadow volumes should be performed;

determine whether the indication indicates that unique file filtering is active;

when the unique file filtering is not active, generating a list from a set of timestamps;

when the unique file filtering is active:

for each timestamp in the set of timestamps, sending a request for file or folder attributes from a corresponding shadow volume by embedding a timestamp as a token in a path such that a distributed file server changes at distributed file system junction points do not affect the timestamp;

generate a list of timestamps based on each response to the request for the file or folder attributes, each entry in list indicative of accessibility of the file or folder associated with said each entry, wherein the request for the file or folder attributes comprises setting a special parsing bit in a header of the request such that the request is flagged and the remote file server device detects the embedded timestamp; and

filter from the generated list of timestamps an entry of a prior version of the file that is not unique with respect to another prior version of the file already represented in the list of timestamps; and provide the filtered list of timestamps in response to the first request to locate the information such that the information enables retrieval of a corresponding version of a file or folder in the filtered list of timestamps, and wherein selection of a prior version of a file replaces a most current version of the file.

52. (Currently Amended) The computing device of claim 51, wherein receive a request to locate information comprises receiving an application program interface call.

53. (Currently Amended) The computing device of claim 51, wherein requesting file or folder attributes from a corresponding volume comprises, identifying a shadow volume via its corresponding timestamp in a request.

54. (Currently Amended) The computing device of claim 51 wherein generate the list of timestamps comprises, determine from response to the request for the file or folder attributes whether the file or folder exists on a shadow volume identified via a timestamp, and if so, including an entry representing a corresponding timestamp in the list of timestamps.

Allowable Subject Matter

3. Claims 32, 33, 35, 39, 47-54 are allowed.

The prior art of record, alone or in combination, does not teach or fairly suggest the combination of steps as recited in independent claims 32 (A method), claim 47 (A computer storage medium), claim 51 (A computing device), wherein "determining whether the indication indicates that unique file filtering is active; when the unique file filtering is not active, generating a list from a set of timestamps; when the unique file filtering is active: for each timestamp in the set of timestamps, sending a request for file or folder attributes from a corresponding shadow volume by embedding a timestamp as a token in a path such that a distributed file server changes at distributed file system junction points do not affect the timestamp; generating a list of timestamps based on each response to the request for the file or folder attributes, each entry in list indicative of accessibility of the file or folder associated with said each entry, wherein the request for the file or folder attributes comprises setting a special parsing bit in a header of the request such that the request is flagged and the remote file server device detects the embedded timestamp; and filtering from the generated list of timestamps an entry of a prior version of the file that is not unique with respect to another prior version of the file already represented in the list of timestamps; and providing the filtered list of timestamps in response to the first request to locate the information such that the information enables retrieval of a corresponding version of a file or folder in the filtered list of timestamps, and wherein selection of a prior version of a file replaces a most current version of the file".

Art Unit: 2169

The dependent claims, bring definite, further limiting, and fully enabled by the specification are also allowed.

Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cam Y T. Truong whose telephone number is (571) 272-4042. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tony Mahmoudi can be reached on (571) 272-4078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cam Y Truong/
Primary Examiner, Art Unit 2169